

REMARKS

Claims 1, 3, 4, 6-8, 15, 16, 18, 20, and 22-24 are pending in the application upon entry of the amendments and new claim. Claim 1 has been amended to disclaim the cited art. Claim 21 has been canceled without prejudice or disclaimer and to expedite allowance of the application. Claim 22 has been amended into independent form to disclaim the cited art. Claim 24 has been added to further describe certain aspects of the invention. Favorable reconsideration in light of the amendments, the new claim, and the remarks which follow is respectfully requested.

Allowable Subject Matter

Applicants note with appreciation the indication, on page 3 of the Office Action, that claims 22 and 23 would be allowable if rewritten in independent form to include all of the features of the base claim and any intervening claims. Accordingly, claim 22 has been amended to comport with the Examiner's indication, and it is believed that claims 22 and 23 are now in condition for allowance.

Applicants further note with appreciation the indication, on page 4 of the Office Action, that the feature "gas phase containing air" would be considered allowable over the cited art. Accordingly, claim 24 has been added to comport with the Examiner's indication, and it is believed that claim 24 is now in condition for allowance.

Anticipation Rejection or Obviousness Rejection of Claims 1, 3, 6-8, 15, 18, 20, and 21

Claims 1, 3, 6-8, 15, 18, 20, and 21 stand rejected under 35 U.S.C. § 102(e) or, in the alternative, under 35 U.S.C. § 103(a) over Weidman (US Patent No. 6,806,203). Weidman relates to a method of forming a dual damascene structure using an amorphous silicon hard mask.

Claim 1 recites "*a method for modifying a porous film mainly having Si-O bonds to obtain a modified porous film having a **relative permittivity of 2.6 or less.***"

Weidman fails to disclose or teach such features. Weidman only discloses and teaches a layer 122 having a dielectric constant of 2.8 or higher. See column 8, lines 18-27 of Weidman. Weidman discloses and teaches a plasma deposition for forming the layer 122 in which TMCTS is deposited in the form of plasma. See column 8, lines 28-36 of Weidman. The plasma deposition, however, cannot produce a modified porous film having a relative permittivity of 2.6 or less. This is because the film produced by the plasma deposition has a very low porosity. See page 5, lines 9-17 of the subject specification. Weidman teaches away from the claimed method because Weidman discloses and teaches a plasma deposition that cannot produce a porous film having a low relative permittivity.

Since Weidman fails to disclose, teach, or suggest all the features of claim 1, Weidman cannot anticipate the claims and cannot make the claims obvious. Accordingly, withdrawal of the rejection is respectfully requested.

Obviousness Rejection of Claims 4 and 16

Claims 4 and 16 stand rejected under 35 U.S.C. § 103(a) over Weidman.

As discussed above, Weidman fails to teach or suggest all the features of claim 1. In particular, Weidman fails to teach or suggest a method for modifying a porous film mainly having Si-O bonds to obtain a modified porous film having a relative permittivity of 2.6 or less. Weidman discloses and teaches a plasma deposition that cannot produce a porous film having a low relative permittivity.

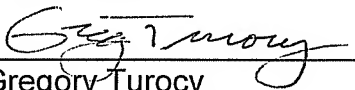
Claims 4 and 16, directly and indirectly, depend on claim 1. As a result, Weidman still fails to teach or suggest all the features of claims 4 and 16. Consequently, Weidman cannot make claims 4 and 16 obvious. Accordingly, withdrawal of the rejection is respectfully requested.

Should the Examiner believe a telephone interview would be helpful to expedite favorable prosecution, the Examiner is invited to contact applicants' undersigned representative at the telephone number below.

In the event any fees are due in connection with this document, the Commissioner is authorized to charge those fees to Deposit Account No. 50-1063.

Respectfully submitted,

TUROCY & WATSON, LLP


Gregory Turocy
Reg. No. 36,952

57th Floor, Key Tower
127 Public Square
Cleveland, Ohio 44114
Telephone (216) 696-8730
Facsimile (216) 696-8731